



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/533,309

01/05/2006

Toshihiko Okamoto

Q87635

4780

23373 7590 03/09/2009
SUGHRUE MION, PLLC
2100 PENNSYLVANIA AVENUE, N.W.
SUITE 800
WASHINGTON, DC 20037

EXAMINER

LOEWE, ROBERT S

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

03/09/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/533,309	Applicant(s) OKAMOTO ET AL.	
	Examiner ROBERT LOEWE	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 February 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 and 77-80 is/are pending in the application.
- 4a) Of the above claim(s) 4-11, 15-21 and 78 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 12-14, 22-26, 77, 79 and 80 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/29/05; 1/5/06; 3/3/06; 12/1/08</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of Group I and species "(a)" [silicate (B)] in the reply filed on 2/17/09 is acknowledged. Currently, claims 1-3, 12-14, 22-26, 77, 79 and 80 are currently pending.

Claim Objections

Applicant is advised that should claim 14 be found allowable, claim 79 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Interpretation

It is noted by the Examiner that claims 12, 22 and 80 are "product-by-process" claims. Even though product-by-process claims are limited and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior art product was made by a different process. *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). In the instant case, any prior art which teaches all of the limitations of component (A) can also be used to reject

Art Unit: 1796

claims 12 and 22, even if such prior art is silent as to the method of preparation of such polymers or if the prior art teaches a different means for preparation of such polymers. For this specific case, it is believed that the final silyl-containing polymers would be expected to have the same properties regardless of how such polymers are prepared.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 12-14, 23, 24, 26, 77, 79 and 80 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamanaka (US 2002/0048680).

Claims 1, 2, 26 and 77: Yamanaka teaches primer compositions comprising a vinyl polymer comprising trimethoxysilane pendant groups (production example) which is blended with, *inter alia*, vinyltrimethoxysilane (which meets the limitations for a dehydrating agent based on Applicants instant specification) and ethyl silicate 40, which is a known early condensate of tetraethylorthosilicate (TEOS). The vinyl polymer produced in the production example satisfies the structural limitations for component (A1) of instant claim 1. Ethyl silicate 40 satisfies the structural limitations of component (B) of instant claims 1 and 2.

Claim 13: Production example 1 utilizes a silane monomer having trimethoxy groups.

Art Unit: 1796

Claim 23: The polymers taught by Yamanaka do not have amide segments in the main chain.

Claims 14 and 79: Yamanaka teaches possible silane monomers include methacrylpropyltrimethoxysilane (page 5). Such a monomer satisfies the limitations of formula (2) of instant claim 14.

Claim 24: The possible silane monomers taught by Yamanaka include silane monomers having ethoxy groups (page 5).

Claims 12, 22 and 80: As stated above, the fact that Yamanaka does not teach that the silyl-group containing polymers are prepared in the manner required by instant claims 12 and 22, such claims are product-by-process claims (see claim interpretation above).

Claims 1-3, 12-14, 22-24, 77, 79 and 80 are rejected under 35 U.S.C. 102(b) as being anticipated by Ooka et al. (US Pat. 4,818,790).

Claims 1-3, 13, 14, 24, 77 and 79: Example 7 of Ooka et al. teaches a curable composition comprising ethyl silicate 40, which satisfies the limitations of component (B) for instant claims 1 and 2, dibutyltin dilaurate, which is a tin carboxylate, satisfying instant claim 3, and a polymer (B-1) having trimethoxysilane pendant groups, thereby satisfying the limitations of component (A-1) of instant claim 1. In the list of possible silane-containing vinyl monomers are those having trimethoxy and triethoxy groups (6:19-43).

Claim 23: The polymers taught by Ooka do not have amide segments in the main chain.

Art Unit: 1796

Claims 12, 22 and 80: As stated above, the fact that Ooka et al. does not teach that the silyl-group containing polymers are prepared in the manner required by instant claims 12 and 22, such claims are product-by-process claims (see claim interpretation above).

Claims 1, 2, 12-14, 22-25, 77, 79 and 80 are rejected under 35 U.S.C. 102(b) as being anticipated by Endo et al. (US Pat. 4,559,387).

Claims 1, 2, 13, 14, 24, 25, 77 and 79: Example 3-1 of Endo et al. teaches a curable composition comprising ethyl silicate 45, which satisfies the limitations of component (B) for instant claims 1 and 2, an aminosilane coupling agent, satisfying instant claim 25, and a silane-modified resin having trimethoxysilane pendant groups, thereby satisfying the limitations of component (A-1) of instant claim 1. In the list of possible silane-containing monomers/capping agents are those having trimethoxy and triethoxy groups (6:6-12).

Claim 23: The polymers taught by Endo et al. do not have amide segments in the main chain.

Claims 12, 22 and 80: As stated above, the fact that Endo et al. does not teach that the silyl-group containing polymers are prepared in the manner required by instant claims 12 and 22, such claims are product-by-process claims (see claim interpretation above).

Claims 1-3, 12-14, 22-26, 77, 79 and 80 are rejected under 35 U.S.C. 102(b) as being anticipated by Nambu et al. (US Pat. 5,639,825).

Claims 1-3, 13, 14, 24-26, 77 and 79: Example 3 of Nambu et al. teaches a curable composition comprising a hydrolyzed condensate of ethyl silicate, which satisfies

Art Unit: 1796

the limitations of component (B) for instant claims 1 and 2, an aminosilane coupling agent (while taught as an adduct between an aminosilane and epoxysilane, the final adduct still has amino groups), satisfying instant claim 25, dibutyltin dilaurate, which is a tin carboxylate, satisfying instant claim 3, methyl orthoacetate, which is a dehydrating agent, satisfying instant claim 26, and a silane-modified resin having trimethoxysilane pendant groups, thereby satisfying the limitations of component (A-1) of instant claim 1. In the list of possible silane-containing monomers/capping agents are those having trimethoxy and triethoxy groups (3:25-50).

Claim 23: The polymers taught by Nambu do not have amide segments in the main chain.

Claims 12, 22 and 80: As stated above, the fact that Nambu et al. does not teach that the silyl-group containing polymers are prepared in the manner required by instant claims 12 and 22, such claims are product-by-process claims (see claim interpretation above).

Claims 1-3, 12-14, 22-26, 77, 79 and 80 are rejected under 35 U.S.C. 102(b) as being anticipated by Wakabayashi et al. (US Pat. 4,977,228).

Wakabayashi et al. teaches a curable composition comprising a polyoxypropylene polymer having alkoxy groups at the terminals (which is prepared in the manner of instant claims 12, 22, and 80) (Preparation example 2). Such polymers are taught to be mixed with other silane-containing polymers along with components (C) and (D) as taught by Wakabayashi et al. therein. Wakabayashi et al. explicitly teaches that ethylsilicate may be employed as component (C) (10:67). Component (D) in the

Art Unit: 1796

examples is taught to include aminosilane coupling agents (Examples 3 and 4).

Wakabayashi et al. teaches that tin carboxylate curing catalyst is preferred (11:49-59 and examples). Substitution of A-1120 of example 2 with ethylorthosilicate affords a composition satisfying the limitations of instant claim 1. Component (D) of example 2, can serve as a dehydrating agent according to Applicant's instant specification.

Relevant Art Cited

The prior art made of record and not relied upon but is considered pertinent to applicants disclosure can be found on the attached PTO-892 form.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Loewe whose telephone number is (571) 270-3298. The examiner can normally be reached on Monday through Friday from 5:30 AM to 3:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For

Art Unit: 1796

more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/R. L./
Examiner, Art Unit 1796
25-Feb-09

/Randy Gulakowski/
Supervisory Patent Examiner, Art Unit 1796